

ATTACHMENT 1-7 CHWSF CONTINGENCY PLAN

1.0 **INTRODUCTION: R315-8-4.2, R315-8-4.3**

1.1 This contingency plan describes the actions that personnel at the Central Hazardous Waste Storage Facility (CHWSF) at Dugway Proving Ground (DPG) will take in response to fire, explosion, or an unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to the air, soil, or surface water as required in, Utah Administrative Code R315-8-4.2 and 4.3. This plan will be implemented immediately if a fire, explosion, or unplanned release of hazardous waste occurs that could threaten human health or the environment.

1.2 This plan describes the following:

- Environmental Coordinator,
- Coordination of emergency services,
- Routine surveillance to detect potential hazards,
- Identification of potential emergencies,
- Emergency response procedures,
- Hazard assessment,
- Evacuation plan,
- Prevention of recurrence or spread of fires, explosions, or spills,
- Identification, storage, and treatment of released materials,
- Post-emergency equipment maintenance,
- Recordkeeping and reporting, and
- Amendment of the contingency plan.

1.3 Table 1 describes the various DPG organizations that are involved when the contingency plan for the CHWSF is implemented and the duties of members of each organization.

Table 1. Dugway Proving Ground Organizations Responsible for Implementation of the Central Hazardous Waste Storage Facility Contingency Plan	
Organization	Responsibilities
Central Hazardous Waste Storage Facility	Provide environmental coordinator and alternate environmental coordinator
	Provide initial response personnel and equipment to manage emergencies
	Manage and contain spills of hazardous waste that is within the ability of CHWSF personnel
	Report any emergencies at the CHWSF to Directorate of Environmental Programs (DEP) and the Fire Department as appropriate
DPG Fire Chief or Assistant Fire Chief	Provide overall management, personnel, and equipment from the fire department and installation response team to manage and contain a fire, explosion or spill.
	Act as the emergency coordinator in the event CHWSF environmental coordinator or alternate are unable to respond to a CHWSF emergency

Table 1. Dugway Proving Ground Organizations Responsible for Implementation of the Central Hazardous Waste Storage Facility Contingency Plan	
Organization	Responsibilities
DPG Security	Inspect CHWSF perimeter fence during non-working hours
	Serve as initial point of contact for emergencies during non-working hours. Maintain a call-out list of 24-hour telephone numbers for environmental coordinator and alternates.
Director of Environmental Programs	Provide environmental oversight to ensure that responses to emergencies are conducted in accordance with Utah and federal regulations
	Make required written reports to appropriate Utah and federal agencies

2.0 ENVIRONMENTAL COORDINATOR: R315-8-4.3, R315-8-4.6

2.1 The emergency response environmental coordinator is responsible for directing actions to be taken in response to a fire, explosion, or unplanned release of hazardous waste to the environment at the CHWSF. The actions taken by the environmental coordinator are described in Section 6.0 of this Attachment.

2.2.1 The environmental coordinator and alternate environmental coordinator for the CHWSF is the CHWSF project manager and lead technician, respectively. During non-working hours the DPG Fire Chief or Assistant Fire Chief will be the environmental coordinator. DPG security maintains an up-to-date call list with home telephone numbers for all environmental coordinators. The DPG security dispatcher can be reached by dialing 911. The following individuals are designated as environmental coordinators for the CHWSF:

Primary Environmental Coordinator Brandon Lawrence
Project Manager CHWSF
Building 6672 Stark Road
Dugway, UT 84022

(435) 831-2997 (work)
(435) 830-7160 (work cell)

Alternate Environmental Coordinator Jeff Nuttall
Lead Environmental Technician CHWSF
Building 6672 Stark Road
Dugway, UT 84022

(435) 831-2997 (work)
(801) 369-4468 (work cell)

3.0 COORDINATION OF EMERGENCY SERVICES: R315-8-4.3(b), R315-8-3.7.

3.1 The environmental coordinator or their alternate has the authority to commit the appropriate resources to responding to the emergency and cleaning up afterwards.

- 3.2 It is anticipated that a combination of CHWSF personnel, the DPG fire department and the DPG installation response team will manage any emergencies involving the CHWSF. The DPG U.S. Army Health Clinic is trained and equipped to provide emergency medical services to individuals who are injured in emergencies at the CHWSF. Agreements with these DPG entities will be maintained:

- DPG US Army Health Clinic,
- DPG Fire Department, and
- DPG Installation Response Team.

4.0 ROUTINE SURVEILLANCE TO DETECT POTENTIAL HAZARDS

- 4.1 The CHWSF is inspected once a day on normal working days by CHWSF personnel. DPG security personnel check the perimeter fence for integrity during non-working hours. If DPG security personnel observe anything unusual, CHWSF personnel will be notified. If DPG security personnel observe an emergency occurring at the CHWSF during non-working hours, the immediate area surrounding the CHWSF will be secured and the environmental coordinator for non-working hours will be notified and appropriate actions will be taken.

5.0 IDENTIFICATION OF POTENTIAL EMERGENCIES: R315-8-4.7

- 5.0.1 This section describes the following potential emergency situations that may occur at the CHWSF and the possibility of any of these situations threatening human health and the environment or affecting people offsite:

- Fire,
- Explosion, and
- Spill or Release.

5.1 FIRE

- 5.1.1 The CHWSF receives a variety of waste streams from hazardous waste generators at DPG. As a result, it is possible that incompatible, ignitable, or reactive waste may be stored at the CHWSF at the same time. Incompatible wastes will be separated, and the buildings are constructed of fire resistant materials however, there is a remote possibility that fire could be ignited due to heat build-up or other factors. A fire may result in the release of hazardous waste to the ground or hazardous constituents to the air. In addition, a fire could start a wildfire if sparks landed on the dry brush surrounding the CHWSF. Emergency procedures will be implemented for fires at any structure at the CHWSF.

- 5.1.2 Since the CHWSF is in an isolated location it is likely that any release to the air would disperse before it reached English Village or an off-site location. A release to the ground is unlikely since the area around the buildings is paved and there are containment dikes inside the buildings. A release to surface water is not possible since there is no surface water in the vicinity.

5.2 EXPLOSION

- 5.2.1 The CHWSF does not accept any explosive waste for storage and only minimal amounts of reactive waste are stored. Therefore, the possibility of an explosion occurring at the CHWSF is considered remote. In addition, segregation of incompatible wastes significantly reduces the possibility of explosion. If an explosion were to occur it may cause a release of hazardous waste

or hazardous constituents to the air or ground. An explosion may also ignite the dry brush surrounding the CHWSF and start a wildfire.

- 5.2.2 Since the CHWSF is in an isolated location it is likely that any release to the air would disperse before it reached English Village or an off-site location. A release to the ground is unlikely since the area around the buildings is paved and there are containment dikes inside the buildings. A release to surface water is not possible since there is no surface water in the vicinity.

5.3 SPILLS AND RELEASES

- 5.3.1 All hazardous waste in the CHWSF is stored in bays designed to contain 10 percent of the total capacity of the building. Therefore, except for a spill occurring during transfer operations, fire, explosion, or catastrophic failure it is unlikely that a spill of hazardous waste would contact the environment.
- 5.3.2 Since hazardous waste is stored in individual containers release of vapors is minimal. In addition, the CHWSF is remote from other buildings and work areas. Therefore, except for fire, explosion, or a catastrophic event where a large release occurs it is unlikely that a release would affect human health or the environment.

6.0 EMERGENCY RESPONSE PROCEDURES: R315-8-4.3(a), R315-8-4.7(d)

- 6.0.1 This section describes the procedures that will be implemented in response to the following emergency situations at the CHWSF:
- Fire that cannot be immediately extinguished,
 - Explosion, and
 - Spill or release accompanied by any of the following:
 - Imminent danger of fire or explosion,
 - Release of toxic fumes,
 - Release of a reportable quantity (RQ) of a chemical or chemicals,
 - Release of material off-site,
 - Evidence of extensive leaching into soil, and
 - Spill or release of chemical agent.

6.1 FIRE

- 6.1.1 In the event of a fire at the CHWSF or in the vicinity, which could threaten the CHWSF the discoverer or first responder will proceed as follows:
- Give a vocal alarm such as “fire” or sound a vehicle horn;
 - Call 911;
 - If properly trained in fire extinguishers, attempt to extinguish a small fire, if possible;
 - If fire cannot be extinguished by first responder, then notify the environmental coordinator or security by phone or radio and supply the following information:
 - The type of incident,
 - Type of material involved, if known,
 - Location and source of the incident,
 - Areal extent of incident and estimated quantity of waste involved, if known,
 - Actions taken to mitigate the emergency and the effectiveness of those actions,and

- What is needed in terms of equipment and personnel to combat the emergency; and
 - Until the environmental coordinator arrives, the senior employee present will be responsible for the following actions:
 - Evacuation of personnel from the immediate vicinity, if necessary and
 - Attempts to contain the problem, if it is within the scope of the individual's training and knowledge.
- 6.1.2 If the fire was extinguished by the first responder, the contingency plan does not need to be implemented and no external notifications are required unless a reportable quantity (RQ) of a chemical was released. See Section 12.0 of this Attachment for reporting requirements.
- 6.1.3 The environmental coordinator will perform the following actions:
- Perform a hazard assessment as described in Section 7.0 of this Attachment;
 - If it is suspected that an RQ of a chemical has been released notify the Directorate of Environmental Programs (DEP), who will notify the appropriate state and federal agencies as described in Section 12.0 of this Attachment (This notification should be done as soon as possible after discovery of the incident, preferably within 15 minutes). If the release occurs during nonworking hours notify the appropriate state and federal agencies as described in Section 12.0 of this Attachment and notify DEP the next business day;
 - Shut down operations in the surrounding area and determine if additional evacuation is necessary;
 - Assure that possible ignition sources are shut down or removed;
 - Attempt to minimize run-off during fire control; and
 - Notify local authorities if assistance is required.
- 6.1.4 Once the fire is over, the environmental coordinator has the following responsibilities:
- Oversee clean up of the area, decontamination of equipment, and disposal of waste generated as a result of the emergency ensuring that proper protective clothing and equipment are used;
 - Determine if it is safe to resume operations by performing an assessment of the safety and integrity of affected areas;
 - Write follow-up reports to state and federal agencies if an RQ of a chemical or chemicals was released;
 - Perform a review of the cause of the fire to determine if any changes need to be made in the process; and
 - Review the effectiveness of the contingency plan and determine if it needs to be amended as described in Section 13.0 of this Attachment.

6.2 EXPLOSION

- 6.2.1 In the event of an explosion at the CHWSF or in the vicinity, which could threaten the CHWSF, the discoverer or first responder will proceed as follows:
- Give a vocal alarm or sound a vehicle horn;
 - Call 911;
 - From a safe distance, notify the environmental coordinator or security by phone or radio and supply the following information:
 - The type of incident,
 - Type of material involved, if known,

- Location and source of the incident,
- Areal extent of incident and estimated quantity of waste involved, if known,
- What is needed in terms of equipment and personnel to combat the emergency; and
- Until the environmental coordinator arrives, the senior employee present will be responsible for evacuation of personnel from the immediate vicinity, if necessary.

6.2.2 The environmental coordinator will perform the following actions:

- Perform a hazard assessment as described in Section 7.0 of this Attachment;
- If it is suspected that an RQ of a chemical has been released notify DEP, who will notify the appropriate state and federal agencies as described in Section 12.0 of this Attachment (This notification should be done as soon as possible after discovery of the incident, preferably within 15 minutes). If the release occurs during non-working hours notify the appropriate state and federal agencies as described in Section 12.0 of this Attachment and notify DEP the next business day;
- Shut down operations in the surrounding area and determine if additional evacuation is necessary;
- Assure that possible ignition sources are shut down or removed;
- Attempt to minimize run-off during fire control; and
- Notify local authorities if assistance is required.

6.2.3 Once the emergency is over, the environmental coordinator has the following responsibilities:

- Oversee clean up of the area, decontamination of equipment, and disposal of waste generated as a result of the emergency ensuring that proper protective clothing and equipment are used;
- Determine if it is safe to resume operations by performing an assessment of the safety and integrity of affected areas;
- Write follow-up reports to state and federal agencies if an RQ of a chemical or chemicals was released;
- Perform a review of the cause of the explosion to determine if any changes need to be made in the process; and
- Review the effectiveness of the contingency plan and determine if it needs to be amended as described in Section 13.0 of this Attachment.

6.3 SPILLS OR RELEASES

6.3.0 The procedures to follow for spills and releases will be categorized into the following:

- Spills into containment and
- Spills or releases outside of containment.

6.3.1 Spills Into Containment

6.3.1.1 Implementation of the contingency plan is not required for spills into containment except when any of the following conditions exist:

- Imminent danger of fire or explosion,
- Release of toxic fumes,
- Release of an RQ of a chemical or chemicals,
- Release of material off-site,
- Evidence of extensive leaching into soil, and/or

- Spill or release of chemical agent.

6.3.1.2 If the spill does not involve any of the above conditions, then the spill will be contained, cleaned up, and the materials involved in the spill and clean up properly managed. Equipment used in the clean up will be decontaminated and wastes will be properly managed.

6.3.1.3 If a spill inside containment involves any of the above conditions, then the procedures in the following section (Section 6.3.2) for spills outside of containment will be followed. It is unlikely that a spill or release of chemical agent will occur at the CHWSF since waste chemical agent must be decontaminated before it can be stored at the CHWSF. However, if F999 or P999 waste is spilled the waste analysis will be reviewed to verify that no chemical agent was present in the spilled waste. If necessary, monitoring in accordance with WD-C Method CL-044R will be performed.

6.3.2 Spills or Releases Outside of Containment

6.3.2.1 In the event of a spill or release outside of containment the procedures described in this section will be followed.

6.3.2.2 The discoverer of the spill or release or first responder will:

- Sound alarm;
- Call 911;
- Notify the environmental coordinator phone or radio and supply the following information:
 - The type of incident,
 - Type of material involved, if known,
 - Location and source of the incident,
 - Areal extent of incident and estimated quantity of waste involved, if known,
 - Actions taken to mitigate the emergency and the effectiveness of those actions,
 - What is needed in terms of equipment and personnel to combat the emergency; and
- Until the environmental coordinator arrives, the senior employee present will be responsible for the following actions:
 - Evacuate the immediate area if necessary,
 - If knowledgeable about the material spilled, trained in spill response, and site conditions are considered safe, attempt to contain the spilled material and attempt to stop the source of the spill or release.

6.3.2.3 The environmental coordinator will perform the following actions:

- Perform a hazard assessment as described in Section 7.0 of this Attachment;
- If there is imminent danger of a fire or explosion, determine if additional evacuation is necessary;
- If there is imminent danger of chemical agent exposure, determine if additional evacuation is necessary;
- If it is suspected that an RQ of a chemical has been released notify DEP, who will notify the appropriate state and federal agencies as described in Section 12.0 of this Attachment (This notification should be done as soon as possible after discovery of the incident, preferably within 15 minutes). If the release occurs during non-working hours notify the appropriate state and federal agencies as described in Section 12.0 of this Attachment and

- notify DEP the next business day;
- If there is no danger of fire, explosion, or chemical agent release shut down operations in the surrounding area, if necessary, and determine if additional evacuation is necessary;
- Determine if assistance is needed from DPG personnel or contractors to help contain the spill or stop the source of the spill or release;
- Ensure that proper protective clothing and equipment is worn when containing the spill; and
- Notify local authorities if assistance is required.

6.3.2.4 Once the spill is contained and the source of the spill or release stopped, the environmental coordinator has the following responsibilities:

- Oversee clean-up of the area, decontamination of equipment, and disposal of waste generated as a result of the emergency ensuring that proper protective clothing and equipment are used;
- Determine if it is safe to resume operations by performing an assessment of the safety and integrity of affected areas;
- Write follow-up reports to state and federal agencies if an RQ of a chemical or chemicals was released;
- Perform a review of the cause of the spill or release to determine if any changes need to be made in the process; and
- Review the effectiveness of the contingency plan and determine if it needs to be amended as described in Section 13.0 of this Attachment.

7.0 HAZARD ASSESSMENT: R315-8-4.7(c) and (d)

7.1 The environmental coordinator will assess the possible hazards to human health and the environment that may result from the fire, explosion, spill, or release. The assessment will consider both direct and indirect effects of the fire, explosion, spill, or release. The assessment will be based on the following information:

- Character, exact source, amount, and areal extent of any released materials,
- Effects of exposure to materials, and
- Effects of mixtures of material involved in the incident.

7.2 The assessment will help determine if there is a significant risk to human-health or the environment and if additional evacuation is required. If evacuation is required beyond the vicinity of the CHWSF, the installation-wide Dugway Contingency Plan (DCP) will be implemented. If there is a threat to human health or the environment outside of DPG then local authorities must be notified to assist in evacuation and the National Response Center or U.S. Environmental Protection Agency (EPA) regional on-scene coordinator, and the Utah Department of Environmental Quality (UDEQ) must be notified immediately. The telephone numbers, addresses and information to be supplied are in Section 12.0 of this Attachment.

8.0 EVACUATION PLAN: R315-8-4.3(e)

8.1 All facility personnel are instructed in evacuation signals, procedures, and routes. The procedures for evacuation from the CHWSF and surrounding area are described below.

8.2 If there is not obvious imminent danger the senior employee present will make the decision to

evacuate the area. Evacuation routes from the CHWSF are listed on Figure 1. Personnel will be accounted for at the assembly points and reported to the environmental coordinator. The environmental coordinator or his designee for all non-essential personnel will arrange transportation away from the CHWSF.

- 8.3** If a wider area needs to be evacuated or the installation needs to be evacuated, the installation-wide DCP will be implemented.

9.0 PREVENTION OF RECURRENCE OR SPREAD OF FIRES, EXPLOSIONS, OR SPILLS: R315-8-4.7(e)

- 9.1** All operations near a hazardous waste spill, fire, or uncontrolled explosion site will be suspended until cleared by the environmental coordinator. Prior to restarting operations, process and structural equipment will be inspected for leaks, cracks, or other potential problems. Released waste will be properly collected and contained. Containers of waste will be stored and properly disposed. If necessary, monitoring in accordance with WD-C Method CL-044R will be performed to verify that there is no residual chemical agent.

- 9.2** A joint review of the cause of the incident will be conducted by the environmental coordinator and appropriate division directors. The operation, which caused the incident, will not be restarted until adequate corrective and preventative measures have been developed and implemented. Any incident, which necessitates implementation of this contingency plan, will be followed by a report formalizing the review of the incident and the follow-up actions required.

10.0 IDENTIFICATION, STORAGE, AND TREATMENT OF RELEASED MATERIALS: R315-8-4.7(b), (g), and (h)(1)

- 10.1** Whenever there is a fire, explosion, or unplanned release, the environmental coordinator or his designee will identify the character, exact source, amount, and areal extent of any released material. Identification of materials will be made by a review of facility records, observation of the materials, or, if necessary, laboratory analysis.
- 10.2** The environmental coordinator will coordinate treatment, storage, and disposal of recovered waste, contaminated soil or water, or any other material that results from a fire, explosion, or release at the facility.
- 10.3** Spilled materials, contaminated soil, and absorbents will be containerized by pumping spillage directly into containers, shoveling directly into containers, or other appropriate method. Damaged or leaky drums will be overpacked and stored in an appropriate, undamaged part of the CHWSF. Washing down the area and containerizing wash down water for off-site disposal will accomplish decontamination of concrete storage pads and structural devices. Floors will be recoated with protective coating if the integrity of the coating has been breached.
- 10.4** Waste, which may be incompatible with the released material, will not be stored in the area where the release occurred until clean-up procedures are completed. All operations in the area not directly related to release control and clean-up activities will be suspended until cleared by the environmental coordinator. Access to the clean-up area will be limited to personnel participating in clean-up operations.

11.0 POST-EMERGENCY EQUIPMENT MAINTENANCE: R315-8-4.3(d), R315-8-4.7(h)(2)

- 11.1** Due to the nature of materials handled at DPG as part of its supply and maintenance missions, DPG maintains equipment suitable for emergency response operations. In addition, the CHWSF maintains supplies and equipment for emergency response at their facility. Attachment 1-6 describes emergency equipment maintained by the CHWSF.
- 11.2** All emergency response equipment used in response to an emergency at the CHWSF will be decontaminated and repaired prior to reuse or it will be replaced. All emergency equipment at the CHWSF will be inspected in accordance with procedures in Attachment 1-3.
- 11.3** Before operations are resumed at the CHWSF, the environmental coordinator shall notify UDEQ that:
- Clean-up of the affected areas has been completed so that normal operations may be resumed and
 - All emergency equipment has been cleaned and is fit for use.
- 12.0** **RECORDKEEPING AND REPORTING: R315-9-1(b) and (c), 9-4; R315-8-4.7(i) and (j)**
- 12.1** Any emergency that results in a release to the air, soil, or water of hazardous waste or hazardous constituents shall be reported to UDEQ if the release exceeds RQs or could threaten human-health or the environment outside of DPG.
- 12.2** RQs for UDEQ include:
- 1 kilogram or more of acute hazardous waste (P-list such as P999),
 - 100 kilograms of hazardous waste (characteristic, F-, K- or U-lists), and
 - Any amount of hazardous waste that presents a potential threat to human health or the environment.
- 12.3** RQs for EPA are variable depending on the hazardous constituents. A list of RQs for wastes stored at the CHWSF will be kept at the facility and updated regularly.
- 12.4** If an RQ of a chemical has been released the appropriate agency or agencies will be notified by phone within 15 minutes, if possible, of the onset of the emergency and provided the following information:
- Name and telephone number of the reporter,
 - Name and address of the CHWSF,
 - Time and type of incident (e.g. release, fire),
 - Name and quantity of material(s) involved, to the extent known,
 - The extent of injuries, if any, and
 - The possible hazards to human-health and the environment outside the facility.
- 12.5** The addresses and phone numbers of the agencies to which reports are made are:
- Utah Department of Environmental Quality
Division of Solid and Hazardous Waste
288 North 1460 West
P.O. Box 144880
Salt Lake City, Utah 84114-4880
24-hour toll-free phone (800) 572-6400 or (801) 538-6170

- 12.6** Within 15 days a written report will be provided to the Executive Director of UDEQ, which will contain the following:
- Name, address, and telephone number of the owner or operator,
 - Name, address, and telephone number of the facility,
 - Date, time, and type of incident,
 - Name and quantity of materials involved,
 - The extent of injuries, if any,
 - An assessment of actual or potential hazards to human health and the environment, where applicable, and
 - Estimated quantity and disposition of recovered material that resulted from the incident.

13.0 AMENDMENT OF THE CONTINGENCY PLAN: R315-8-4.5

- 13.1** The CHWSF contingency plan will be revised under the following circumstances:
- Revisions to facility permit,
 - Failure of the plan in an emergency,
 - Changes in the facility design, construction, operation, maintenance, or other circumstances that materially increase the potential for fires, explosions, or discharges of hazardous waste or hazardous waste constituents or changes the response necessary in an emergency,
 - Changes in the list of environmental coordinators, and
 - Changes in the list of emergency equipment.
- 13.2** The CHWSF contingency plan shall be reviewed semiannually if revisions have not been made. Revisions to the contingency plan, environmental coordinator list, and equipment lists require a formal modification of the permit in accordance with R315-8-4.5 and R315-3-4.3.

Figure 1. Evacuation Routes from the Central Hazardous Waste Storage Facility

